



Research Paper

Marketing cost, margin and price spread of Bt cotton in Beed district of Maharashtra

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ABSTRACT : Investigation was made to marketing cost, margin and price spread in Bt cotton. The study was conducted in the Beed district market for surveying of 20 market intermediaries. Two marketing channel were noticed in sale of Bt cotton viz., Producer-Village merchant-Ginner-Consumer (channel-I), Producer-Ginner-Consumer (channel-II). It was observed that per quintal marketing cost was higher in channel-I for grade II i.e. Rs. 1050.70 followed by grade I Rs. 1048.56 and Rs. 1020.52 in grade III and Rs. 997.28 for grade I followed by grade II Rs. 991.23 and Rs. 956.20 in grade III in channel-II, respectively. Producers share in consumer's rupee was maximum in channel-II i.e. 76.55 per cent in grade III followed by grade II (75.60%) and for grade I (74.81%), respectively. Regarding price spread in Bt cotton marketing was highest in channel-II Rs. 6200, 6000 and 5800 for grade I, II, III, respectively and in channel-I Rs. 6100, 6000 and 5800 for grade I, II and III, respectively.

KEY WORDS : Bt cotton, Marketing cost, Marketing margin, Marketing channels, Price spread

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INTRODUCTION :

Cotton (*Gossypium* spp.) 'king of fibre' belonging to the genus *Gossypium* under *Malvaceae* family. Cotton the 'White Gold' is played a vital role in updating Indian Economy in evaluation of human ethical, moral and cultural values. Although the cotton is primarily a fibre crop, it is used as food and feed. Cotton plays a key role in national economy in terms of both employment generations and foreign exchange earnings. India has area (Lakh ha.) under cotton of in 2012-2013 is 119.78 lakh hectares with the production 34.22 million tons (365.00 lakh bales). And yield 486 kg/ha, respectively. (Source – Department of Agriculture and Co-operation, Govt. of India 2014). Production of cotton crop for the 2014-2015 season (October-September) at 406 lakh bales,

maintaining its earlier projection made in November last year, in which Maharashtra with 90 lakh bales (Indian Cotton Federation, 2015). The major Bt cotton producing states are Punjab, Haryana, Maharashtra, Madhya Pradesh and Andhra Pradesh.

Maharashtra state with approximately 10 per cent geographical area of the country accounts for about 34 per cent area and 19 per cent of the total cotton production in the country. Maharashtra state has first in area and production of cotton in country. Thus, the state is contributing 22.70 per cent of total production in the country. Area under cotton crop in Maharashtra state 41.46 lakh hectare with production of 79.00 lakh bales and productivity 324 kg per hectare in year 2012 (Source-Cotton Advisory Board-2013). In Beed district total area under cotton in the year 2013 total area under cotton is

2097 hectare out of 4192 hectare of total cultivated area. (Source–District Agriculture Officer, Beed 2013).

MATERIALS AND METHODS :

Multistage sampling design was adopted for selection of district, tehsils, villages, as well as producer farmer of Bt cotton. In the first stage, Beed district was purposively selected on the basis of area under the Bt cotton production. In the second stage, Georai and Beed tehsils was selected on the of basis higher area under Bt cotton. In third stage, eight villages were selected from the selected tehsils on the basis of highest area under Bt cotton production. The selected villages were namely Jategaon, Kekat pangri, Golegaon, Thakar-Adgaon in Gevrai tehsil and Kalasambar, Balapur, Neknur, Mandavkhel in Beed tehsil. In the fourth stage, from each village, the separate list of Bt cotton grower was prepared. From each of the lists twelve farmers of Bt cotton were randomly selected. Thus, from one village, twelve farmers were selected with equal distribution. Thus, total 96 farmers of Bt cotton were selected for present study. In analytical techniques, that is to study the socio-economic characteristics of Bt cotton growers was achieved by tabular analysis. The cross sectional data were collected from 96 Bt cotton growers with the help of pre-tested schedule for the year 2013-2014. The techniques like tabular analysis, arithmetic mean and ratio were used to analyze the data. Per hectare costs, returns and profit of Bt cotton were estimated. The techniques like tabular analysis and different marketing terms and concepts were used to analyze the data.

RESULTS AND DATA ANALYSIS :

The results obtained from the present investigation

as well as relevant discussion have been summarized under following heads :

Marketing cost incurred by Bt cotton producer :

Cost incurred by producer was estimated and presented in Table 1. Marketing cost of Bt cotton incurred by producer was highest as Rs. 82.00 per quintals (Grade II) in channel-II, while marketing cost of Bt cotton, incurred by producer for Grade I, II, III was Rs. 21.06, 22.30, 19.50 and Rs. 82.00, 84.00, 80.00 per quintal in channel-I and channel-II, respectively. It was observed that the proportionate expenditure on labour charge was highest in channel-I *i.e.* Rs.25 channel-II for Bt cotton. In channel-II, highest expenditure on transportation *i.e.* Rs. 52.50 per cent (grade III) followed that by Rs. 31.25 per cent on labour and 12.50 per cent on weighing charge for per quintal. losses are higher in channel I *i.e.* Rs.5.29 per cent for grade II and followed by 4.79 in grade I and 2.56 per cent in grade III. In channel I, it has proportionate shares are Rs. 3.17, 3.86, 1.84 for grade I, II, III per quintal. Similar results was also found by Birla *et al.* (2014) and Manan *et al.* (2013).

Marketing cost of Bt cotton incurred by village merchant :

Cost incurred by village merchant in channel-I was estimated and presented in Table 2(a). Result revealed that in regard to village merchant in channel-I of Bt cotton, the cost of marketing was found to be Rs. 116, 120, 114 for grade I, grade II, grade III per quintal in which proportionate share of transportation charge was highest as Rs. 52 per quintal with its share 44.82, 43.33, 45.61 per cent due to distant market followed that of by labour charge Rs. 40 per quintal with its share 34.48, 33.33, 35.89 per cent, respectively. Commission charge, losses, interest on fixed assets, weighing charge, storage

Table 1 : Marketing cost of Bt cotton incurred by producer

Sr. No.	Particular	(Rs. /q)					
		Channel I			Channel II		
		Grade I	Grade II	Grade III	Grade I	Grade II	Grade III
1.	Labour charge	15 (71.22)	15 (67.26)	15 (76.92)	25 (30.49)	25 (29.76)	25 (31.25)
2.	Electric charge	-	-	-	1.02 (1.24)	1.71 (2.03)	0.90 (1.12)
3.	Storage charge	1.05 (4.98)	1.12 (5.02)	0.80 (4.10)	1.38 (1.68)	2.05 (2.44)	1.51 (1.89)
4.	Transportation charge	4.00 (18.99)	5.00 (22.42)	3.20 (16.41)	42.00 (51.22)	42.00 (50.00)	42.00 (52.50)
5.	Weighing charge	-	-	-	10 (12.19)	10 (11.90)	10 (12.50)
6.	Losses	1.01 (4.79)	1.18 (5.29)	1.50 (2.56)	2.60 (3.17)	3.24 (3.86)	1.47 (1.84)
	Total	21.06 (100)	22.30 (100)	19.50 (100)	82.00 (100)	84.00 (100)	80.00 (100)

Figures in the parenthesis indicate percentages to total

Table 2: Marketing cost of Bt cotton incurred by different intermediaries**(Rs. /q)****Table 2(a) : Marketing cost of Bt cotton incurred by village merchant**

Sr. No.	Particular	Channel I					
		Grade I	Per cent	Grade II	Per cent	Grade III	Per cent
1.	Labour cost	40	34.48	40	33.33	40	35.89
2.	License charge	1.09	0.94	1.20	1.00	0.98	0.86
3.	Weighing charge	10	8.62	10	8.33	10	8.77
4.	Commission charge	3.00	2.29	3.00	2.50	3.00	2.63
5.	Shop tax	1.02	0.88	1.42	1.18	0.89	0.78
6.	Electricity charge	1.38	1.19	1.05	0.87	0.90	0.80
7.	Storage charge	1.20	1.03	1.26	1.05	1.05	0.92
8.	Transportation charge	52	44.82	52	43.33	52	45.61
9.	Communication charge	2.16	1.86	3.04	2.53	1.08	0.95
10.	Depreciation and repair	1.22	1.05	2.01	1.67	1.12	0.98
11.	Interests on fixed assets	1.16	1.16	1.54	1.28	1.22	1.07
12.	Losses	2.01	1.73	3.48	2.90	1.76	1.54
	Total	116.00	100.00	120.00	100.00	114.00	100.00

Table 2(b) : Marketing cost incurred by Ginner in channel I

Channel I							
1.	Labour cost	250	27.42	250	27.52	250	28.18
2.	License charge	0.96	0.10	0.98	0.11	1.02	0.11
3.	Shop tax	2.60	0.28	2.70	0.30	2.40	0.27
4.	Electricity charge	70.73	7.73	77.30	8.51	76.00	8.57
5.	Storage charge	2.40	0.26	2.60	0.29	2.30	0.26
6.	Commission charge and tax	517.50	56.77	512.60	56.36	496.00	52.87
7.	Transportation charge	46.00	5.05	46.00	5.06	46.00	5.18
8.	Depreciation and repair	6.50	0.71	5.40	0.59	4.02	0.45
9.	Communication charge	1.26	0.14	1.75	0.19	1.40	0.16
10.	Interests on fixed assets	5.00	0.55	4.35	0.48	3.88	0.44
11.	Losses	5.30	0.58	5.32	0.58	4.00	0.45
	Total	911.50	100.00	908.40	100.00	887.02	100.00

Table 2(c) : Marketing cost incurred by Ginner in channel- II

Channel-II							
1.	Labour cost	250	27.31	250	27.55	250	28.18
2.	License charge	0.80	0.09	0.88	0.10	1.02	0.11
3.	Shop tax	2.10	0.23	2.35	0.26	2.40	0.27
4.	Electricity charge	70.78	7.70	77.30	8.52	76.00	8.57
5.	Storage charge	2.00	0.22	2.20	0.24	2.30	0.26
6.	Commission charge and tax	528.40	56.73	512.40	56.48	496.00	52.87
7.	Transportation charge	46.00	5.02	46.00	5.07	46.00	5.18
8.	Depreciation and repair	5.60	0.61	5.75	0.63	4.02	0.45
9.	Communication charge	1.20	0.13	1.35	0.15	1.40	0.16
10.	Interests on fixed assets	4.50	0.49	4.60	0.51	3.88	0.44
11.	Losses	4.20	0.46	4.45	0.49	4.00	0.45
	Total	915.50	100.00	907.23	100.00	876.02	100.00

Figures in the parenthesis indicate percentages to total

charge are have lower proportions, respectively.

Marketing cost of Bt cotton incurred by Ginner in channel I :

In regard to ginner in channel-I of Bt cotton, marketing costs are showed in Table 2(b), highest cost of marketing was found to be Rs. 911.50 per quintal for grade I and Rs. 908.40, 887.02 for grade II and III in which proportionate share of tax and commission charges was highest as Rs. 517.50, 512.00, 496.00 for grade I, II, III per quintal, respectively with its proportionate share 56.77, 56.36, 52.87 per cent followed that of by labour charges Rs. 250 with the proportionate share of Rs. 27.42, 27.52, 28.18, respectively. Electricity charges incurred are Rs.70.48, 77.30, 76.00 with its proportionate share of 7.73, 8.51 and 8.57 per cent. The transport charges incurred Rs. 46 per quintal with proportion of 5.05, 5.06, and 5.18 per cent. In next order, license charge, shop tax, storage charge, communication charge and losses determines lower values in total marketing cost.

Marketing cost of Bt cotton incurred by Ginner in channel II :

In regard to ginner in channel-II of Bt cotton marketing costs are showed in Table 2(c), highest cost of marketing was found to be Rs. 915.28 per quintal for grade I and Rs.907.23, 876.20 for grade II and III in which proportionate share of tax and commission charges was highest as Rs. 528.40, 512.40, 486.40

for grade I, II, III per quintal, respectively with its proportionate share 57.73, 56.48, 55.51 per cent followed that of by labour charges Rs. 250 with the proportionate share of Rs. 27.31, 27.55, 28.53, respectively. Electricity charges incurred are Rs.70.48, 77.30, 76.00 with its proportionate share of 7.70, 8.52 and 8.67 per cent. The transport charges incurred Rs. 46 per quintal with proportion of 5.02, 5.07, and 5.25 per cent. In next order, license charge, shop tax, storage charge, communication charge and losses determines lower values in total marketing cost. Losses are higher in channel I compared to channel II *i.e.* 0.46, 0.49, 0.40 per cent in that for grade II is highest.

Per quintal marketing cost, margin and price spread in Bt cotton marketing :

Per quintal marketing cost, marketing margin and price spread by various intermediaries in different channels in Bt cotton were calculated and presented in Table 3. In regard to price paid by consumer was the highest as Rs. 6200 per quintal for grade I in channel-I, followed by Rs. 6000, 5800 in grade II, III, respectively. The total marketing cost involved was higher in channel I compared to channel II is Rs. 1048.56 (17.19%), 1050.70 (17.51%), 1020.52 (17.01%). Thus, the total marketing margin involved in marketing of cotton in channel I is 562.50, 616.60, 468.98 *i.e.* 9.22, 10.19, 7.82 per cent, respectively. The total marketing cost involved in channel II is Rs.

Table 3 : Per quintal marketing cost, margin and price spread in Bt cotton marketing

Sr. No.	Particular	Channel I			Channel II		
		Grade I	Grade II	Grade III	Grade I	Grade II	Grade III
1.	Net price received by producer (producers share in consumer rupee)	4488.94 (73.58)	4392.70 (73.21)	4310.50 (74.32)	4638 (74.81)	4536 (75.60)	4440 (76.55)
2.	Expenses incurred by producer	21.06 (0.34)	22.30 (0.37)	19.50 (0.34)	82.00 (1.22)	84.00 (1.40)	80.00 (1.38)
3.	Price received by producer	4510 (79.93)	4415 (73.58)	4330 (74.65)	4720 (76.12)	4620 (77.00)	4520 (77.93)
4.	Expenses incurred by village merchant in channel I	116.00 (1.90)	120.00 (2.00)	114.00 (1.96)	-	-	-
5.	Margin of village merchant	74.00 (1.21)	65.00 (1.08)	56.00 (0.93)	-	-	-
6.	Price paid by ginner (channel I, II)	4700 (77.05)	4600 (76.67)	4500 (77.59)	4720 (77.38)	4620 (77.00)	4520 (77.93)
7.	Expenses incurred by ginner (channel I, II)	911.50 (14.94)	908.40 (15.14)	887.02 (14.78)	915.28 (14.76)	907.23 (15.12)	876.20 (15.11)
8.	Margin of ginner (channel I, II)	488.50 (8.01)	491.60 (8.19)	412.98 (6.88)	564.72 (9.11)	472.77 (7.88)	403.80 (6.96)
9.	Price paid by consumer	6100 (100.00)	6000 (100.00)	5800 (100.00)	6200 (100.00)	6000 (100.00)	5800 (100.00)
10.	Marketing cost	1048.56 (17.19)	1050.70 (17.51)	1020.52 (17.01)	997.28 (16.08)	991.23 (16.52)	956.20 (16.49)
11.	Marketing margin	562.50 (9.22)	616.60 (10.19)	468.98 (7.82)	564.72 (9.10)	472.77 (7.88)	403.80 (6.96)
12.	Price spread	1611.06 (26.41)	1667.30 (27.79)	1489.50 (24.82)	1562.00 (25.19)	1464.00 (24.40)	1360.00 (23.79)

997.28 (16.08%), 991.23 (16.52%), 956.20 (16.49%). Thus, the total marketing margin involved in marketing of cotton is higher in channel I, Rs. 564.72, 472.77, 403.80 i.e. 9.10, 7.88, 6.96 per cent, respectively. Also the price spread in channel-I was higher than the channel-II i.e. Rs. 1611.06, 1532.70, 1489.50 which is 26.41, 25.54, 24.82 per cent than Rs. 1562.00 (25.19%), 1464.00 (24.40%), 1360.00 (23.45%), respectively. Producer's share in consumer's rupee was highest in channel II as 76.55 per cent for grade-III followed by 77.10 per cent for grade-II and 74.81 per cent in grade-I. As we moved from channel-II to channel-I producer's share in consumer's rupee was decreased from grade-I, then grade-III and II. On the contrary, the proportionate share of marketing cost was continuously increased and was highest for grade-II followed by grade-I and grade-III for channel-I. Marketing margin and price spread was continuously increased and was highest for grade-I followed by grade-II and grade-III for both channels. Net price received by consumer and price spread was higher in channel II compared to channel I so channel II is beneficial compared to channel I. More or less similar result was also obtained by Ramesh (2013) and Verma *et al.* (2002).

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